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Office of the Fire Marshal

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FIRE SAFETY PLANNING FOR RECYCLING FACILITIES AND WASTE PROCESSING OPERATIONS

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September 1998

GUIDELINE

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Association of Municipal Recycling Coordinators
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Fire Fighters Association of Ontario
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Insurer's Advisory Organization Inc.
Ministry of Municipal Affairs and Housing
Municipal Fire Service Instructors Association
Ontario Automotive Recycler's Association
Recycling Council of Ontario
Occupational Health and Safety Branch, Ministry of Labour
Ontario Association of Fire Chiefs
Ontario Municipal Fire Prevention Officer's Association
Ontario Waste Management Association
Ontario Professional Fire Fighters Association
Public Health Branch, Ministry of Health
Solid Waste Association of North America

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Abstract

This guideline is intended to assist owners and managers of recycling facilities and waste handling operations to develop and implement effective Fire Safety Plans for their businesses. The guide also provides guidance for owners on how to comply with the various aspects of the Ontario Fire Code that apply to their property. The guideline has been designed in an easy to use, step-by-step format, with checklists and examples that can be useful for preparing a comprehensive Fire Safety Plan.

1.0 SCOPE

Fire safety is an important responsibility for everyone. The consequences of poor fire safety practices and lack of emergency planning are especially serious in properties where processes or quantities of stored materials would pose a serious threat to the community and environment.

In an effort to prevent fires and minimize the damage from fires when they occur, owners and operators of recycling operations and waste handling facilities are encouraged to develop and implement Fire Safety Plans for their property.

This document has been developed by the Office of the Fire Marshal in cooperation with various stakeholders (refer to acknowledgments) to provide guidance on how to develop comprehensive Fire Safety Plans for recycling facilities and waste processing operations.

2.0 BACKGROUND

2.1 General Requirements For Fire Safety Planning

A Fire Safety Plan is required under Section 2.8 of the Ontario Fire Code to be prepared, approved and implemented in the following properties: (Refer to Appendix A)

- buildings or open areas where quantities of flammable and combustible liquids exceed 500 L in total or exceed 250 L of Class 1 Liquids;
- buildings or premises 4 storeys or more, including storeys below grade;
- outdoor tire storage yards;
- buildings containing a high hazard industrial occupancy, having an occupant load exceeding 25 people (i.e., rubber processing plants, waste paper processing plants);
- buildings containing a medium hazard industrial occupancy, having an occupant load exceeding 100 people (i.e., tire storage, warehouses).

The Fire Code, Ontario Regulation 388/97 is a Provincial Regulation made under Part IV of the Fire Protection and Prevention Act, 1997, S.O. 1997, c.4. This Regulation states that the owner is responsible for carrying out "all provisions of the Code". An "owner" is defined as, "any person, firm or corporation controlling the property under consideration."

In a court of law, the definition of "owner" could be interpreted to mean the owner whose name is on title (an individual or individuals, a corporation, etc.). "Owner" could also include any other person in control of the property such as an executive officer of a corporation owning the building, administrator, or even a maintenance supervisor. Penalties for non-compliance by an individual can be as high as $25,000 per count and/or imprisonment for up to one year. Penalties for corporations may be a fine of up to $50,000 per count.

Owners, managers and administrators of a recycling or waste handling facility should be intimately familiar with their responsibilities under the Ontario Fire Code, since contravention of any provision can result in a penalty listed above.

In addition to the requirements within the Ontario Fire Code, the local fire department under the provisions of the Fire Protection and Prevention Act, 1997 may require the owner to develop and implement a Fire Safety Plan.

Owners should be proactive in the area of fire safety by developing and implementing a Fire Safety Plan, even in premises that are not required by law to have one.

Developing and implementing a Fire Safety Plan will demonstrate your interest in promoting fire safety. Resources used in the development of a Fire Safety Plan will return significant benefits by reducing the incidents of fire and the impact of fire.

In most instances, a Fire Safety Plan can be prepared by the owner or an experienced business manager by following the steps outlined in this guideline and in consultation with the local fire department.

In instances where the Fire Safety Plan is required by the Ontario Fire Code or the local fire department, a copy of the plan must be submitted to the Chief Fire Official for approval and be retained on site in an approved location.

Once approved by the Chief Fire Official, the owner is responsible for implementing all aspects of the Fire Safety Plan.

- the Ontario Fire Code, Ontario Regulation 388/97, and
- the Fire Protection and Prevention Act, 1997, S.O. 1997, c.4

These important reference documents are available at Publications Ontario, 880 Bay Street, Toronto, M7A 1N8, 1-800-668-9938.

This and other important information is also available from the Office of the Fire Marshal Web site by using the following URL: www.gov.on.ca/OFM

2.2 What is a Fire Safety Plan?

A Fire Safety Plan is a detailed document designed to deal with all aspects of fire safety relating to a specific building or property. The document is intended to be a reference manual outlining the fire safety practices to be routinely used. Each fire safety plan should include the following information:

(Review the following information now, and use this checklist as you prepare your fire safety plan to be sure the plan addresses each of these issues. Refer to Appendix A for the actual Fire Code Requirements.)

Every fire safety plan should include:

- ☐ emergency procedures to be used in case of fire, including: sounding the alarm, notifying the fire department, provisions for access for fire fighting, instructing occupants on procedures to be followed when the fire alarm sounds, evacuating endangered persons, and confining, controlling and extinguishing the fire;
- ☐ instructions on ways to prevent fires and methods to control fire hazards throughout the business;
- ☐ information about the appointment, organization and instruction of designated supervisory staff and other occupants, including their related fire safety duties and responsibilities;
- ☐ the method and frequency of conducting fire drills;
- ☐ detailed maintenance procedures for fire protection systems and building features;
- ☐ the identification of alternate fire safety measures in the event of a temporary shutdown of fire protection equipment or systems, so that occupant safety can be assured;
- ☐ instructions and schematic diagrams describing the type, location and operation of building fire emergency systems;
- ☐ in outdoor tire storage yards include procedures for notifying the fire department and assisting them in accessing the property for water tanker shuttle operations and fire fighting purposes.

2.3 Benefits of Implementing a Fire Safety Plan

- Reduces the incidence of fire
- Promotes fire hazard identification and elimination
- Promotes employee safety and awareness
- Increases employee morale by allaying safety concerns
- Coordinates business and fire department resources during a fire emergency
- Reduces the potential impact of a fire on the business and community (injuries, dollar losses, liability, etc.)
- Enhances Fire Code compliance

3.0 DEFINITIONS

The following definitions have been copied from the Ontario Fire Code to assist you in understanding the meaning of these words and phrases where they are used in this guideline and in the Regulation. Section 1.2 of the Ontario Fire Code contains definitions for various words and phrases that are used in the Regulation. The definitions are intended to help people understand their meaning in the context of the regulation.

Approved: means approved by the Chief Fire Official.

Building: means any structure used or intended for supporting or sheltering any use or occupancy.

Check: means visual observation to ensure the device or system is in place and is not obviously damaged or obstructed.

Chief Fire Official: means the assistant to the Fire Marshal who is the Municipal Fire Chief or a member or members of the fire department appointed by the Municipal Fire Chief under Subsection 1.1.8. or a person appointed by the Fire Marshal under Subsection 1.1.8.

Combustible Liquid: means any liquid having a flash point at or above 37.8°C and below 93.3°C.

Flammable Liquid: means a liquid having a flash point below 37.8°C and having a vapour pressure not more than 275.8 kPa (absolute) at 37.8°C as determined by ASTM D 323, "Vapor Pressure of Petroleum Products (Reid Method)".

Flash Point: means the minimum temperature at which a liquid within a container gives off vapour in sufficient concentration to form an ignitable mixture with air near the surface of the liquid.

Inspect: means physical examination to determine that the device or system will apparently perform in accordance with its intended function.

Owner: means any person, firm or corporation having control over any portion of the building or property under consideration and includes the persons in the building or property.

Supervisory Staff: means those occupants of a building who have some delegated responsibility for the fire safety of other occupants under the fire safety plan and may include the fire department where the fire department agrees to accept these responsibilities.

Test: means the operation of a device or system to ensure that it will perform in accordance with its intended operation or function.

Vapour Pressure: means the pressure exerted by a liquid as determined by ASTM D 323, "Vapor Pressure of Petroleum Product" (Reid Method).

4.0 THE TEN STEP PROCESS

Step 1	**CONDUCT FIRE SAFETY AUDIT**	*Identify all fire risks and employee resources*
Step 2	**APPOINTMENT AND ORGANIZATION OF EMERGENCY SUPERVISORY STAFF**	*Establish supervisory staff structure and related responsibilities*
Step 3	**DEVELOP EMERGENCY PROCEDURES**	*Establish procedures for what to do in case of fire*
Step 4	**FIRE DRILL PROCEDURES AND TRAINING**	*Train for effective response*
Step 5	**MAINTENANCE OF BUILDING FACILITIES AND FIRE PROTECTION EQUIPMENT**	*Check, test and maintain*
Step 6	**ALTERNATE MEASURES FOR TEMPORARY SHUTDOWN OF FIRE PROTECTION EQUIPMENT OR SYSTEM**	*What to do when emergency warning or suppression systems are down*
Step 7	**CONTROL OF FIRE HAZARDS**	*Avoid, prevent, reduce and control all fire hazards*
Step 8	**FIRE DEPARTMENT ACCESS FOR FIRE FIGHTING AND RELATED FIRE SUPPRESSION INFORMATION**	*Meet the needs of your Fire Department*
Step 9	**PREPARING SCHEMATIC DIAGRAMS AND SITE PLAN**	*Know your property; be prepared*
Step 10	**POSTING OF EMERGENCY PROCEDURES AND EMERGENCY PHONE NUMBERS**	*Post the Fire Safety Plan, Emergency Procedures and phone numbers in key locations*

4.1 *Step 1* - Conduct a Fire Safety Audit

The development of a Fire Safety Plan is intended to take into consideration:

- the special nature of the business;
- the availability of human resources;
- the fire safety features provided within each building or premise; and
- processes or operations which may create a fire hazard.

Before preparing your Fire Safety Plan, it is suggested that you conduct a fire safety audit of your property using the following check lists. The audit will help you identify those factors affecting fire safety within your property. While conducting the audit, make notes of pertinent information relating to fire safety issues where applicable. This information is needed to develop a useful Fire Safety Plan. The resulting Fire Safety Plan will be a unique document, designed to address your property and its special needs and characteristics. It will ensure the optimum use of staff and all safety features provided.

Auditing Your Property

If your business involves outdoor storage, or processes materials outdoors, begin your audit by examining the exterior of the property first.

Where a Certificate of Approval has been required to satisfy environmental or other purposes, the approval criteria should be re-examined to ensure the site still corresponds with the necessary compliance provisions.

Start by preparing a site drawing. This may help you to gain a better overall view of the fire safety issues affecting the property. The site drawing may become a key element of your fire safety plan. Where necessary the drawing should be made to scale if possible and identify the following;

- ☐ drawing orientation (north, south, east, west)
- ☐ the property lines
- ☐ security fences
- ☐ the use or occupancy of adjoining properties, i.e., residential, industrial, or other and the approximate distances to closest neighboring buildings
- ☐ points of entry for fire fighting vehicles
- ☐ other points of entry
- ☐ vehicle roadways and fire department access routes suitable for heavy equipment
- ☐ buildings on site
- ☐ water supplies, private hydrants, public hydrants, ponds, or reservoirs
- ☐ outdoor storage areas listing the types a nd quantities of materials stored at each location
- ☐ waterways, dikes, drains, sewer and manholes
- ☐ gas shut off valves or other important isolation valves

Auditing Your Building(s)

Next, prepare a separate detailed audit for each building on site. Features to examine and identify are (where applicable):

- ☐ the nature of building construction (combustible or non combustible);
- ☐ building size by area, (area of each storey and total area);
- ☐ number of storeys, including basements;
- ☐ use and occupancy of the building;
- ☐ fire walls, fire separations
- ☐ explosion relief vents
- ☐ fire department access points, including the principal entrance for fire department response;
- ☐ portable fire extinguishers;
- ☐ fire alarm system;
- ☐ sprinkler system;
- ☐ fire standpipe (hose) system;
- ☐ fire department pumper connections;
- ☐ water supply control valves and fire pumps;
- ☐ exits;
- ☐ emergency power and lighting equipment;
- ☐ hazardous processing areas (identifying the nature of the process);
- ☐ storage areas (identifying type and quantities of materials stored).

Auditing Human Resources

Compile information about the employees on site. This will ensure that all of the emergency procedures are accounted for in the plan.

- ☐ Identify the number of full time and part time employees who work on site.
- ☐ Identify the people who work on different shifts, where applicable.
- ☐ Identify accommodation needs of employees (i.e., physical disabilities, language requirements)
- ☐ Identify security personnel if security staff are provided.
- ☐ Compile a list of telephone numbers for use during an emergency, including the building owner, the manager, supervisor, and other employees.

Auditing Materials Stored, Handled or Processed

Depending upon the nature of the business, the materials that are stored, handled or processed on site will vary significantly. Many materials typically processed in a recycling facility or a waste management site are stable and inert and don't pose a problem unless they become exposed to a fire.

Materials that would pose a problem in the event of fire include, but are not limited to:

- ☐ gases flammable or inert aerosols;
- ☐ flammable/combustible liquids;
- ☐ liquid chemicals, organic oils/solvents;
- ☐ plastics, any type;
- ☐ rubber, including tires, whole or shredded;
- ☐ metals treated with preservatives or oils;
- ☐ wood and wood containing chemicals;
- ☐ paper, cardboard.

If your business handles or processes any of the materials listed above, refer to the following Sections of the Ontario Fire Code to determine if the activity is regulated:

- ☐ Section 3.2. - Wood Products
- ☐ Section 3.3. - Indoor Tire Storage
  - Indoor General Storage
- ☐ Section 3.5. - Salvage Shops and Salvage Yards, General
  - Piling
  - Outdoor Tire Storage Yards
- ☐ Parts 4 - Flammable and Combustible Liquids
- ☐ Section 5.6 - Compressed Gas Cylinders
- ☐ Section 5.11 - Combustible Fibres
  - Storage
  - Fire Protection

The local fire department may be consulted about any questions or problems that arise during your analysis.

Audit For Fire Hazards

One of the goals of effective fire safety planning is to reduce the frequency of fire. In order to achieve this goal, fire hazards must be identified and preventative measures put in place.

Ask yourself the following questions:

- ☐ Are the requirements outlined under Part 4 of the Fire Code adhered to for the storage and handling of flammable and combustible liquids?
- ☐ Are the welding and cutting operations carried out in accordance with the requirements of Section 5.17 of the Fire Code?;
- ☐ Are the requirements of Section 3.4. of the Fire Code adhered to involving the facilities industrial trucks?
- ☐ Are there flammable compressed gasses, combustible dusts, combustible fibres or substances present that would be prone to spontaneous combustion?
- ☐ Is there machinery or equipment that produces high temperatures that could be a potential source of ignition?

4.2 *Step 2* - Appointment and Organization of Supervisory Staff

The fire safety plan must also include the appointment and organization of designated "**supervisory staff**" (see definitions) and alternates who are required to be trained to respond to a fire emergency in a predetermined manner. Supervisory staff duties and responsibilities must be outlined in the fire safety plan. The person(s) designated as supervisory staff must be qualified and willing to take on the added duties and responsibilities. The person(s) who is designated as "supervisory staff" does not have to be from management or be a supervisor from the company.

Employee and emergency supervisory staff responses must be well planned in order to reduce the risks from fire. It is essential that supervisory staff understand their responsibilities and are trained to respond to a fire emergency in a prompt, positive, and intelligent manner.

In order for the emergency response portion of the fire safety plan to be effectively implemented, management and every employee must understand the important role they play in promoting fire safety in the workplace. Everyone must be required to adhere to the fire safety practices and procedures. The orientation training program for all employees should include fire safety instructions on:

- what to do upon discovery of fire
- what to do upon hearing an alarm of fire
- how to prevent or minimize fire hazards in the workplace

Depending upon various factors, the Fire Safety Plan may only involve the designation of one or two emergency response supervisory staff. While in larger operations, a more structured emergency response may be detailed in the Fire Safety Plan to include fire wardens who are trained to coordinate the evacuation of specific areas and/or a fire brigade trained and equipped to confine and extinguish a fire.

Owner/Manager Responsibilities for Fire Safety

- Ensure the Fire Safety Plan is developed, approved and fully implemented.
- Appoint, organize and train emergency supervisory staff to carry out fire safety duties and emergency procedures.
- Ensure a sufficient number of assistants are designated and trained to act in a supervisory capacity in the event that the appointed emergency supervisory staff are absent from the building/site.
- Ensure that fire drills involving all staff are held at least once a year.
- Ensure that fire hazards are identified and eliminated or controlled.
- Provide alternate measures for fire safety during the temporary shut down of fire protection equipment or systems.
- Complete the necessary checks, tests, inspections and maintenance of fire protection equipment as required by the Fire Code.
- Keep permanent records of all tests and corrective measures for a period of at least two years.
- Keep adequate records of training and fire drills for a period of at least one year.

4.3 *Step 3* - Develop Emergency Procedures

The fire safety plan must include emergency procedures to be used in case of fire. This includes:

- sounding the fire alarm;
- notifying the fire department;
- provisions for access for fire fighting;
- instructing occupants on procedures to be followed when the fire alarm sounds;
- evacuating endangered occupants; and
- confining controlling and extinguishing the fire.

The procedures for outdoor sites will differ from procedures that should be followed for occupants within buildings.

Sample of Typical Emergency Procedures for all Employees

Upon discovery of fire

- Leave the fire area immediately.
- Close all doors behind you to confine the fire.

- Activate the fire alarm and/or alert other staff.
- Notify the fire department. (All telephones on site should have the emergency phone number of the fire department listed and the address of the property conspicuously posted close by for reference in an emergency.)
- Use the exit stairwells to leave the building.

Upon Hearing an Alarm of Fire

- Leave the building immediately.
- Close all doors behind you to confine the fire.
- Use the exit stairwells to leave the building.
- Ensure that the fire department has been notified.

NOTE:

- Do not use the elevator(s)
- Do not re-enter the building.

Sample of Supervisory Staff Duties to be Followed in Event of Fire

- Call the Fire Department
- Provide access to the fire fighters, (provide master keys, etc.)
- Meet arriving fire fighters
  - provide them with relevant information about the quantities and nature of materials stored or processed on site
  - provide them with a copy of the fire safety plan and related drawings
  - provide other assistance as required
- Do not silence the fire alarm system or shut off the sprinklers until instructed to do so by the fire department

4.4 *Step 4* - Fire Drill Procedures and Training

Training and practicing fire drills must become an integral part of each facility's preparedness. A fire emergency often generates anxiety and excitement which may create a stressful environment for responders and decision makers. Persons with little training or experience may have difficulty dealing effectively with the emergency.

Fire drill procedures must be prepared in consultation with the fire department. The fire drill procedures must be outlined in the Fire Safety Plan. The fire drill must involve the response of supervisory staff while taking into consideration the response of other employees and people on site or present in the building.

Supervisory staff must be instructed in the fire emergency procedures that are described in the fire safety plan before they are given any responsibility for fire safety. A copy of the fire emergency procedures and other duties outlined in the fire safety plan must be given to all supervisory staff.

Employees should receive training in the safe use of portable fire extinguishers and other fire safety equipment. This would include instructions on how to activate and reset the fire alarm system where appropriate.

Staff must be instructed to react quickly to a fire emergency with emphasis placed on promoting and practicing personal safety.

Fire drills must be conducted at least once each year (refer to Appendix A, Subsection 2.8.3.). The date and time of all fire drills, as well as the names of participating staff, must be recorded and be retained for at least one year after the drill.

Other Factors to Consider When Organizing and Conducting Fire Drills

- Does the local fire department have to be notified about the fire drill?
- Do all employees understand the procedures they are expected to follow in an emergency, (are there language barriers, etc.)?
- Are there people who require assistance in evacuating (mobility/hearing disabilities)?
- Are the fire drills pre-announced or a surprise?

- Are employees trained to safely shut down critical systems or equipment they are using during an emergency in order to prevent further hazards?
- Are fire drills conducted at different times to train employees and supervisory staff on all shifts?
- Are there measures in place to respond to the safety needs of guests or contractors during an emergency?
- Will employees practice using fire fighting and related safety equipment to enhance their personal safety and response to a fire emergency?
- Is there a procedure established to evaluate the fire drill once it has been completed?

4.5 *Step 5* - Maintenance of Building Facilities and Fire Protection Equipment

The fire safety plan must contain a detailed schedule identifying the required **checks**, **inspections** and **tests (defined words)** of all fire safety systems and features provided.

The building owner/manager must:

- Ensure that all fire protection features provided in each building are **checked**, **inspected**, **tested** and maintained in accordance with the frequencies specified in Part's 2 and 6 of the Ontario Fire Code and all applicable referenced standards;
- When using in-house personnel to conduct some of the checks, inspections and tests, ensure they are fully trained and qualified to carry out the activity;
- Keep permanent records of all tests and corrective measures taken for a period of two years after they are made. The records are to be made available upon request to the Chief Fire Official (Sub-Section 1.1.2. of the Ontario Fire Code);

4.6 *Step 6* - Alternate Measures for Temporary Shutdown of Fire Protection Equipment or Systems

Alternative measures are intended to be included in the fire safety plan. The following information outlines some examples of alternative measures. Where possible, all staff should be made aware of temporary shut downs.

The following practices and procedures are provided as a guide:

Temporary Shut Down of Fire Alarm System (example)

Notify all supervisory staff that the fire alarm system is temporarily shut down. A fire watch shall be appointed to conduct a sequential tour of the building in areas normally served by fire detection devices (i.e., rooms or spaces protected by sprinklers, heat detectors, smoke detectors or some other form of fire detection devices). The fire watch individual would record their patrols and also have some means of communication that can be used to notify the fire department in the event of a fire. In the event of fire, efforts should be taken to notify persons in the building that a fire emergency exists.

Temporary Shut Down of Standpipe System (example)

Notify all supervisory staff that the standpipe system is temporarily shut down.

Temporary Shut Down of Sprinkler System (example)

Notify the Fire Department (phone # _____) and all supervisory staff that the sprinkler system is temporarily shut down. The work conducted on the sprinkler system shall be programmed by the contractor to enable the system to be operational as quickly as is possible in the circumstances. Full sprinkler protection shall be restored when work on the system is discontinued. Closed sprinkler valves shall be tagged or marked in an approved manner. (Refer to Ontario Fire Code Subsection 6.5.2.)

While the sprinklers are shut down, a fire watch shall patrol the area until the sprinkler system has been restored. "Hot works" such as welding or cutting, must be prohibited in the area until the sprinkler protection has been restored or have precautions put into place if the "hot works" have to be used.

Temporary Shut Down of Special Extinguishing Systems (example)

Everyone working in an area where a special extinguishing system is shut down and all supervisory staff must be notified.

4.7 *Step 7* - Control of Fire Hazards

The owner and/or his or her managers must take the lead role in identifying potential fire hazards and establishing fire prevention practices to eliminate or control the hazard(s) safely. All employees must understand that every precaution is to be taken to minimize accidents and prevent injuries. Employees must be fully trained in the established fire prevention practices and these practices must be adopted by everyone and be fully enforced.

The information collected while preparing the *Audit of Materials Stored, Handled or Processed* (step one) may reveal a number of potentially hazardous activities that should be rigidly monitored and controlled. The Fire Safety Plan must contain detailed procedures/practices for monitoring and controlling each of the activities. The fire prevention practices should take into account the requirements of applicable regulations and practical fire safety precautions. Employees working in these areas must be trained to carry out the established procedures in order to reduce the risk of fire. Some activities that may create a fire hazard could include, but not be limited to:

- ☐ handling flammable or combustible liquids
- ☐ handling or processing compressed gases
- ☐ welding or cutting
- ☐ shredding aerosol containers
- ☐ disposing of vehicle fuel tanks or compressed gas cylinders
- ☐ refueling or recharging industrial trucks

To identify and control common fire hazards, a designated person should perform a weekly walk-through of the facility, examining common areas, storage areas, access routes for fire fighting, stairwells, furnace rooms and other service areas.

Check the following to ensure that potential fire hazards are controlled:

- ☐ Smoking is restricted to designated areas.
- ☐ Smoking materials are disposed of with caution and never in combustible containers.
- ☐ Furnace and electrical service rooms are always kept clear of combustible materials.
- ☐ Unobstructed access is available to these areas at all times.
- ☐ Materials or equipment are not stored in exit stairwells.
- ☐ Fire doors remain closed. Doors must not be wedged open or interfere with the self-closing device installed on any door.
- ☐ All appliances used on site meet with appropriate CSA or certified standards.

4.8 *Step 8* - Fire Department Access For Fire Fighting and Related Fire Suppression

Information

Once a fire begins, it spreads rapidly.For this reason, it is essential that the fire department obtain access to the property as quickly as possible. A designated employee(supervisory staff) must be trained to respond to an emergency to ensure that the fire department can enter the property without delay in order to initiate fire suppression activities. The designated employee must be knowledgeable about the property and processes which take place in it.

Fire emergencies occurring after regular business hours can also lead to a delay in the fire departments' ability to

locate the fire and initiate fire suppression activities. Some businesses and fire departments utilize a security "lock box" arrangement to reduce this type of delay. In the absence of on-site personnel, the fire department can obtain prompt access to keys to permit prompt entry and to other important information.

- In addition to providing access for fire fighting, the fire department may also request other important information about the property and its contents when they arrive.

- For example, the fire department may request a current inventory of materials that are stored and/or processed on site to be prepared and be retained for reference during an emergency. Many materials stored or processed on site are stable and inert, however if they become involved in a fire, they can pose serious risks to emergency responders and to the surrounding community. The inventory would identify the location, type and quantities of materials present. It could also contain information about the properties of the materials, identify the combustion by-products, fire fighting techniques and other relevant factors. This type of information can often be obtained by referring to Material Safety Data Sheets (MSDS) or from other sources. This information should be kept readily available for the fire department reference along with the instructions and schematic diagrams described in Step 9. Ask the local fire department what information would be useful to them during an emergency.

Other factors to take into consideration may include but not be limited to:

- ☐ Establish procedures for notifying supervisory staff of an emergency so that they can respond promptly to the site after regular business hours.
- ☐ Identify fire department access problems that could be created due to seasonal climatic conditions.
- ☐ Establish procedures to prevent obstructions to fire fighting created by site machinery or due to temporary obstructions created by materials placed in aisles or roadways.
- ☐ Establish procedures to gain access to other critical areas in a building or to fire equipment in a shared industrial complex (i.e., gas shut off, fire protection control valves, etc.)

4.9 *Step 9* - Preparing Schematic Diagrams and Site Plans

The Ontario Fire Code Clause 2.8.2.1. (h) requires, *"instructions, including schematic diagrams, describing the type, location and operation of building emergency systems"* to be prepared for use by responding supervisory staff and fire fighters during an emergency.

Where the property is large, or there are outdoor activities that may pose a fire or access problem, a site drawing should also be prepared and incorporated in the fire safety plan. (Use the checklist provided in step one auditing your property and building.) When preparing the schematic diagrams and site plan, ensure that the information is useful and simple.

Refer to Appendix B for a legend of sample symbols which could be used to standardize the various elements that are identified on the drawings. Also remember to include a compass type of orientation symbol (North arrow).

In addition to the schematic diagrams, an inventory of materials and a site drawing would be extremely useful during an emergency. Information of this nature is not required by the Ontario Fire Code, however the information would be very useful for fire fighters to refer to in the event of a fire. Consult with the local fire department to determine the nature of the drawings that should be prepared and incorporated into your fire safety plan.

4.10 *Step 10* - Posting Emergency Procedures and Emergency Phone Numbers

- ☐ Every telephone should have the fire department telephone number and the business' name and address prominently posted close by for reference during an emergency.
- ☐ The emergency procedures must be clearly posted in each storey of every building.
- ☐ A copy of the Fire Safety Plan must be kept in an approved location.
- ☐ The schematic diagrams, instructions and related information about the property should be readily accessible to responding fire department personnel in an emergency.
- ☐ In outdoor tire storage yards, the telephone number of the fire department and location of the nearest telephone must be prominently posted and maintained at the storage yard.
- ☐ A current list of emergency phone numbers should also be prepared and be appended to the fire safety plan for ease of reference during or after an emergency.

The emergency phone numbers could include but not be limited to:

- fire department
- ambulance
- police department
- owner
- manager
- fire alarm service company
- sprinkler service company

In addition, if your business contains materials or substances that would pose a risk to the environment or community in the event of fire, the following phone numbers should also be kept readily available for reference during an emergency.

- The Ministry of the Environment, Spills Action Centre 1-800-268-6060
- CANUTEC (Canadian Transport Emergency Centre) 613-996-6666 (emergency)

5.0 SUMMARY / IMPLEMENTATION / UPDATING THE FIRE SAFETY PLAN

To derive the full benefit of your Fire Safety Plan:

- ☐ Implement all aspects of the Fire Safety Plan.
- ☐ Ensure that all employees are trained in the procedures to take upon discovery of fire or upon hearing an alarm of fire.
- ☐ Ensure that all employees are trained in the precautions and procedures required to be taken to control and eliminate fire hazards.
- ☐ Conduct required fire drills and train the designated supervisory staff to respond to a fire or an alarm of fire in a prompt and safe manner.
- ☐ Schedule and perform the required maintenance of the fire safety features provided in your building as required.
- ☐ Routinely update relevant information pertaining to changes in the inventory of site materials for the fire fighters reference during an emergency.
- ☐ At least once a year, review the contents of Fire Safety Plan to ensure that it remains current.
- ☐ Consult with the local Chief Fire Official if you plan to make any changes to the Fire Safety Plan.

Appendix A

APPENDIX A
Extracts from the Ontario Fire Code

SECTION 2.8 EMERGENCY PLANNING

Subsection 2.8.1. General

Application

2.8.1.1.(1) The requirements of this Section shall apply to **buildings** containing a

(a) Group 'A' or 'B' **occupancy**,

(b) Group 'C' **occupancy** where the **occupant load** exceeds 10,

(c) Group 'D' **occupancy** where the **occupant load** exceeds 300,

(d) Group 'E' **occupancy** where the **occupant load** exceeds 300,

(e) Group 'F' Division 1 **occupancy** where the **occupant load** exceeds 25,

(f) Group 'F' Division 2 **occupancy** where the **occupant load** exceeds 100, or

(g) Group 'F' Division 3 **occupancy** where the **occupant load** exceeds 300.

(2) Despite Sentence (1), the requirements of this Section shall apply to **buildings** or premises

(a) containing 4 **storeys** or more, including **storeys** below **grade**,

(b) subject to the provisions of Subsection 3.5.3.,

(c) subject to the provisions of Article 4.1.5.6.,

(d) subject to the provisions of Article 4.12.4.1.,

(e) regulated by Section 9.3 (Boarding, Lodging and Rooming Houses),

(f) subject to the provisions of Sentence 9.5.3.1.(3), or

(g) used as a convalescent home or children's custodial home providing sleeping accommodation for more than 3 persons.

(3) Despite Sentence (1), the requirements of this Section apply to recreational camps regulated under the **Health Protection and Promotion Act**.

Instructions in emergency procedures

2.8.1.2.(1) Supervisory staff shall be instructed in the fire emergency procedures as described in the fire safety plan before they are given any responsibility for fire safety.

(2) Supervisory staff shall be available on notification of a fire emergency to fulfil their obligation as described in the fire safety plan.

(3) It is not necessary that **supervisory staff** be in the **building** on a continual basis.

Subsection 2.8.2. Fire Safety Plan

Measures in a fire safety plan

2.8.2.1.(1) A fire safety plan shall include

(a) the emergency procedures to be used in case of fire including sounding the fire alarm, notifying the **fire department**, provisions for access for fire fighting, instructing occupants on procedures to be followed when the fire alarm sounds, evacuating endangered occupants and confining, controlling and extinguishing the fire,

(b) the appointment and organization of designated **supervisory staff** to carry out fire safety duties,

(c) the instruction of **supervisory staff** and other occupants so that they are aware of their responsibilities for fire safety,

(d) the holding of fire drills including the emergency procedures appropriate to the **building**,

(e) the control of fire hazards in the **building**,

(f) the maintenance of **building** facilities provided for the safety of occupants,

(g) the provision of alternative measures for the safety of occupants during any shutdown of fire protection equipment and systems or part thereof, and

(h) instructions, including schematic diagrams, describing the type, location and operation of **building** fire emergency systems.

(2) The fire safety plan shall be prepared, **approved** and implemented in **buildings** regulated by Article 2.8.1.1.

(3) The fire safety plan shall be kept in the **building** in an **approved** location.

Institutional occupancies

2.8.2.2. There shall be sufficient **supervisory staff** available in **institutional occupancies** to carry out the duties as required in the fire safety plan.

High buildings

2.8.2.3.(1) The fire safety plan in **buildings** within the scope of Subsection 3.2.6. of the **Building Code** shall, in addition to the requirements of Sentence 2.8.2.1.(1), include

(a) the instruction of **supervisory staff** on the use of the voice communication system,

(b) the procedures for use of elevators and for evacuation of persons in need of assistance,

(c) the action to be taken by **supervisory staff** in initiating any smoke control or other fire emergency systems installed in a **building** in the event of fire until the **fire department** arrives,

(d) the procedures established to facilitate **fire department** access to the **building** and fire location within the **building**, and

(e) the instructions for the **supervisory staff** and **fire department** for the operation of the fire emergency systems.

2.8.2.4. A copy of the fire emergency procedures and other duties for **supervisory staff** as laid down in the fire safety plan shall be given to all **supervisory staff**.

Posting fire emergency procedures

2.8.2.5. At least one copy of the fire emergency procedures shall be prominently posted and maintained on each **floor area**.

Subsection 2.8.3. Fire Drills

Procedures

2.8.3.1.(1) The procedure for conducting fire drills described in Clause 2.8.2.1.(1)(d) shall be included in the fire safety plan, taking into consideration

(a) the **building occupancy** and its fire hazards,

(b) the safety features provided in the **building**,

(c) the desirable degree of participation of occupants other than **supervisory staff**,

(d) the number and degree of experience of participating **supervisory staff**, and

(e) the **testing** and operation of the emergency systems installed in **buildings** within the scope of Subsection 3.2.6. of the **Building Code**.

(2) The fire drill procedures required in Sentence (1) shall be prepared in consultation with the **Chief Fire Official**.

Frequency

2.8.3.2.(1) Fire drills as described in Sentence 2.8.3.1.(1) shall be held once during each 12-month period for the **supervisory staff**, except that

(a) in day-care centres and Group 'B' **occupancies**, fire drills shall be held at least monthly,

(b) in schools attended by children, total evacuation fire drills shall be held 3 times in each of the fall and spring school terms, and

(c) in **buildings** within the scope of Subsection 3.2.6. of the **Building Code**, fire drills shall be held every 3 months.

(2) Records of a fire drill required by Sentence (1) shall be kept for 12 months after the fire drill.

Fire safety planning

OUTDOOR TIRE STORAGE YARDS

3.5.3.3.(1) Except as provided in Sentences (2) to (4), storage yards shall comply with the requirements of Section 2.8.

(2) The fire safety plan shall include provisions respecting access for water tanker shuttle operations within the **fire department** access routes, if water tanker shuttle operations are required in the circumstances of the storage yard.

(3) At least one copy of the fire emergency procedures shall be prominently posted and maintained at the storage yard.

(4) The telephone number of the **fire department** and location of the nearest telephone shall be posted conspicuously in attended locations.

FLAMMABLE AND COMBUSTIBLE LIQUIDS

Fire safety plan

4.1.5.6. The requirements of Section 2.8 shall apply to **buildings** and open areas where the quantities of **flammable** and **combustible liquids** exceeds 500 L in total or exceeds 250 L of Class I liquids.

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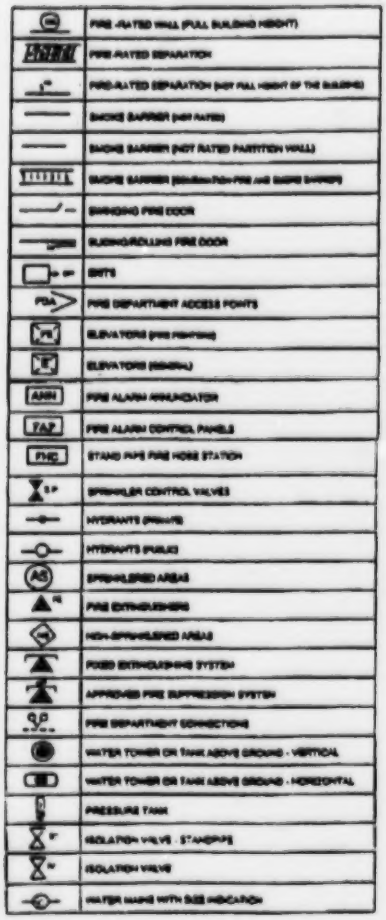
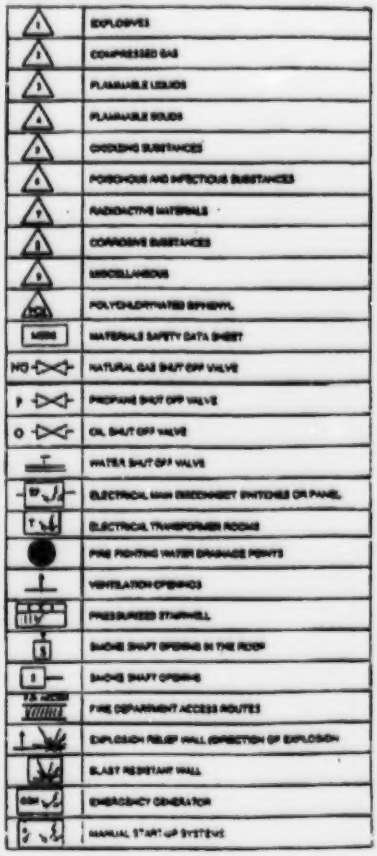
Appendix B

Sample Symbols For Diagrams and Drawings





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